



# Attaining Sustainable Development Goals in sub-Saharan Africa; The need to address environmental challenges

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## ABSTRACT

The Sustainable Development Goals (SDGs) is the new developmental agenda that has been embraced by all countries including those of sub-Saharan Africa. The SDGs consists of the economic, social and environmental dimensions. The aim of this short communication is to examine the central role of the environment in sub-Saharan Africa's march towards achieving the SDGs, though all three dimensions are vital and inter-related. This piece covers an introduction to the SDGs, Africa's performance on MDG 7, the dynamics of environmental potentials and problems in sub-Saharan Africa and how to address the problems within the context of the SDGs. Pertinent information was gotten from global and African reports on MDGs/SDGs as well as from scientific papers. Sub-Saharan Africa is endowed with a diverse and rich environment, but environmental degradation persists and climate change is an emerging problem. The environment is central to her growth and transformation but there seems to be no end in sight to the cycle of poor environmental management and consequent poverty leading to unsustainable development. With scarce resources at their disposal, the attention of governments across sub-Saharan Africa and other stakeholders need to be drawn continually to environmental problems which constitute a serious impediment to development and viable partnerships need to be established to tackle these problems. Environmental challenges are capable of undermining the SDGs in sub-Saharan Africa. Significant progress will not be made on the SDGs until environmental issues are given a deserved priority by concerned stakeholders.

## 1. Introduction

The Sustainable Development Goals (SDGs) is the post Millennium Development Goals (MDGs) global developmental agenda adopted by governments at the UN General Assembly in September 2015. The SDGs are seventeen aspirational objectives with 169 targets and represent a broader scope of developmental objectives expected to guide actions of governments, international agencies, civil society and other institutions for 15 years- 2016–2030 (United Nations, 2015a; United Nations Development Programme (UNDP), 2015; Food and Agricultural Organization of the United Nations, 2016). The 2030 Agenda is a global vision for people, the planet and long-term peace and prosperity enabled by viable partnerships with the aim of ending poverty and safeguarding the planet and her natural resources (UN, 2015a; UNDP, 2015).

The SDGs are universal (relevant to both developed and developing nations), inclusive and yet context-specific and requiring country specific actions. Three dimensions of sustainable development have been duly recognized- economic, social and environmental. The SDGs were born out of the collective realization that for meaningful development to take place globally, a paradigm shift is needed that will foster stronger international environmental governance, and ensure a balanced integration of the economic, social

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and environmental dimensions of sustainable development (United Nations Environmental Programme (UNEP), 2015). All the three aspects of sustainable development are crucial, inter-linked and mandatory if the SDGs are to be achieved and they balanced out each other and none is more important than the other (UN, 2015a). However, in sub-Saharan Africa, the environment appears to have been neglected for long when it comes to developmental issues (New Partnership for Africa's Development, 2003). Naturally, the environment has an epidemiologic or determinant role when it comes to sustainable development. The founding document for the SDGs which was adopted in 2015, in itself recognises the importance of the environment to sustainable development “We recognize that social and economic development depends on the sustainable management of our planet’s natural resources. We are therefore determined to conserve and sustainably use oceans and seas, freshwater resources, as well as forests, mountains and dry lands and to protect biodiversity, ecosystems and wildlife” (UN, 2015a, p.13). The document goes on further to say that “most vulnerable countries and, in particular, African countries deserve special attention” including “focused and scaled up assistance to least developed countries (most of which are in sub-Saharan Africa) in areas of need, in line with relevant support programmes”. In terms of sustainable development, the environment appears to be sub-Saharan Africa’s most pivotal need and the area that needs the most attention.

It is in this regard that this piece becomes necessary, so that environmental issues can come to the front burner after centuries of relegation in sub-Saharan Africa. By the design of the SDGs, tackling environmental issues will in itself lead to a development spiral that will engulf and promote all aspects of development. With pertinent policies, the environment can be a major catalyst to the attainment of the SDGs. Africa’s sustainable development basically hinge on on goods and services derived from its environment. Environmental resources such as the soil, water, land, forest, marine ecosystems and mineral resources are at the centre of primary production, and support most of the sectors that drive socioeconomic development in Africa. Thus, natural capital is critical to sustainable growth and development and with innovative strategies, the environment can be a major fulcrum for positive economic and social changes instead of being a cause for concern as things currently stand. (United Nations Economic Commission for Africa (UNECA), 2015a).

Environmental sustainability is central to the 2030 Agenda. Over half of the 17 SDGs are directly linked with the environment: poverty, food and agriculture, health, water and sanitation, human settlements, climate change, renewable energy, sustainable consumption and production, oceans, and terrestrial ecosystems. Out of the 169 targets, about 50% (86 targets) pertains to environmental sustainability, including a minimum of one in each of the 17 SDGs (UNEP, 2015), thus showing that there is no single goal without an environmental feature to it. Thus, the environment is central to the SDGs and national governments and relevant international organizations must recognize that particular attention should be given to environmental issues including deployment of significant human and material resources aimed at meeting environmental targets. This is particularly important in sub-Saharan Africa where little resources are usually earmarked for environmental challenges. The erstwhile MDGs which had eight goals including Goal 7, “Environmental Sustainability” drove the global developmental agenda between year 2000 and 2015 and significant developments took place globally but to a lesser extent in sub-Saharan Africa.

## 2. Sub-saharan Africa’s performance on MDG 7- environmental sustainability

Prior to the MDGs coming to an end in 2015, sub-Saharan Africa made great progress on a number of MDGs target despite initial adverse conditions and the slow start to the MDGs. Notable gains from the MDGs include increased enrolment of school children in primary school, bridging the gender gap in school enrolment, improved representation of women in national parliaments, reducing child and maternal mortality as well as reducing the prevalence of HIV/AIDS (United Nations Economic Commission for Africa (UNECA), 2015b; UN, 2015b). However the least progress in sub-Saharan Africa appeared to have been made in the areas of poverty and hunger reduction and environmental sustainability with some countries having regression rather than progress in some environmental indices (UNECA, 2015b). The environment has a direct impact on poverty alleviation and hunger reduction, whilst progress in both of them can also be counterproductive to promotion of environmental values and this where the concept of sustainable development becomes important.

In terms of goal 7 of the erstwhile MDGs, a major target was to integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources with indicators such as proportion of land area covered by forest, carbon dioxide (CO<sub>2</sub>) emissions, consumption of ozone-depleting substances, proportion of fish stocks within safe biological limits and proportion of total water resources used. Between 1990 and 2010, the proportion of land area covered by forest globally reduced by 1% (from 32% to 31%) while the reduction in sub-Saharan Africa was by 3.1% from 31.2% to 28.1%, showing that deforestation has occurred more in sub-Saharan Africa than most parts of the world (UNECA, 2015b; UN, 2015b). Deforestation, forest degradation and poor forest management discharge carbon into the atmosphere compounding the problem of climate change. In terms of CO<sub>2</sub> emissions, though Africa could be said to have fared better than most continents, however, between the period 1990–2010, only 16 African countries reduced their carbon dioxide emissions with more than two thirds (38) increasing them. Although Africa contributes only a minute fraction of the world’s total CO<sub>2</sub> emission, she accounts for 20% of the global net CO<sub>2</sub> emission land use which measures emissions of CO<sub>2</sub> resulting from land use changes (UNECA, 2015b). On the positive side, in consonance with global trends, most African countries have reduced their consumption of Ozone-depleting substances and the trend is likely to continue. Additionally, increasing proportion of terrestrial and marine areas are now protected in Africa and the entire world (UNECA, 2015b; UN, 2015b), but overfishing is now constituting serious danger to the world and especially sub-Saharan Africa, because decline of fish stocks below sustainable-yield levels is a key driver of ecological and evolutionary harm to marine ecosystems. In recent times, overfishing is particularly worse in the African continent with some developed nations being accused of being the architect behind it. The effects of overfishing are grievous and are generally detrimental to the SDGs. The fish stocks in sub-

Saharan are not only been depleted but there is associated degradation of its aquatic environments and significant threats to the sustainability of its 'fisheries sector', which reportedly employs about 10 million people with fish providing up to 70% of the daily animal protein intake in some countries. Sustainable fisheries and aquaculture thus becomes imperative (UNECA, 2015a; Fleshman, 2006). With regards to targets on the sustainable access to safe drinking water and basic sanitation as well as improvement in the life of slum dwellers, sub-Saharan Africa lagged far behind other world regions. For instance, globally Africa has the least number of those who gained access to an improved drinking water source and virtually all sub-Saharan Africa countries were not even near achieving basic sanitation target, in fact six countries regressed. Additionally, in 2012, slum prevalence was highest in sub-Saharan Africa (62 per cent) compared to 13% in North Africa, and the number of slum dwellers is still growing and thus worsening water and sanitation challenges (UNECA, 2015b).

Despite not meeting up with MDG 7 coupled with existing environmental degradation problems as well as the climate change, it is not all gloom and doom for sub-Saharan Africa as she has the potential to weather the storm and turn environmental issues from being an albatross to a major "stepping stone" of development and this is what the SDGs are all about.

### 3. The dynamics of environmental potentials and problems in sub-saharan Africa

Though sub-Saharan Africa is besieged with enormous and seemingly insurmountable environmental challenges, she also has immense environmental potentials which if harnessed will hasten socio-economic development. The African continent reportedly has 60 per cent of the world's potential arable land, and with good management could become the world's agricultural powerhouse, whilst conserving its unique biodiversity and ecosystems. The continent also has enormous renewable resources, for instance it has the highest amount of solar radiation globally, with massive solar and wind power potential as well as that of geothermal and hydropower energy. Bioenergy has not even been explored at all and with the population at her disposal and the amount of organic wastes being generated, this constitutes another huge power potential (Mohammed, 2016).

The African continent is rich in natural resources, and extractive industries constitute a significant part of income to many countries. It has more than 50,000 known plant species, 1500 species of birds and 1000 mammals (NEPAD, 2003). Sub-Saharan Africa is a large and diverse region that boasts a multitude of ecosystems- deserts, gallery forests, tropical rain forests, savannahs, grasslands, rivers, wetlands, woodlands and montane. All these ecosystems are teeming with abundant wildlife and support all manner of plants and vegetation all year round. However, a lot of environmental degradation goes on in sub-Saharan Africa and these ecosystems are adversely affected by many man-made activities including unsustainable agricultural practices such as slash-and-burn agriculture and logging, overfishing, pollution, construction of dams, as well as uncontrolled grazing by livestock. The situation being made worse with rapid population expansion with subsequent unplanned urbanization, the emerging threat of climate change and poor environmental management and these constitute the most important dynamics to sub-Saharan Africa's environmental challenges.

The population grew rapidly in sub-Saharan Africa from a little over 228 million in 1960 to over a billion in 2015 as a result of high fertility combined with declining mortality and there was no corresponding increase in economic growth (World Bank Group, 2016) and it is projected that between now and 2050, Africa will add more population than any world region (PRB, 2013). Total fertility rate in sub-Saharan African women averages 5.1–5.2 children (PRB, 2013; Bongaarts and Casterline, 2013) and all the 10 countries worldwide with the highest fertility are all in sub-Saharan Africa (PRB, 2013). Additionally, she has a population that is quite young, 43% of the population being below age 15, thus the potential for further rapid expansion of the population is huge and unmet need for family planning remains high as well. Overpopulation is majorly due to rural -urban migration and population expansion in urban areas brings immense pressure on the available land for the production of food, infrastructure and industrialization and this ultimately has a bearing on the "carrying capacity" of the environment thus generating an ecological imbalance which not only adversely affects the environment, but also in the long term depreciates the socio-economic condition of individuals and the entire populace. Urbanization poses significant challenge to sustainable development in sub-Saharan Africa because it is largely unplanned and many governments seem oblivious of its adverse effects. Although all continents are facing high rates of urbanization, but the rate in Africa is rising far higher than others largely due to rural to urban migration and increased or non-decreasing natality (UNECA, 2015a; UNHABITAT, 2015). Population growth and unplanned urbanization lead to a cycle of poverty for the generality of the people as they place tremendous pressures on ocean, fresh water, land, and other natural resources. Population control and planned urbanization in sub-Saharan Africa thus become imperative. With adequate planning and proper environmental-friendly infrastructural development, urbanization can become an influential "SDG tool" with more jobs created, improved livelihoods, better economic growth and marked social inclusion, thus touching positively on all dimensions of the SDGs. The need to have planned or controlled urbanization has been taken into consideration under Goal 11 of the SDGs which is focussed on sustainable cities and communities (UN-HABITAT, 2015).

Climate change is one of the greatest challenges facing the world and its adverse impacts undermine the ability of all countries to achieve sustainable development (UN, 2015a), this is especially true for sub-Saharan Africa which contributes the least to climate change and is projected to be most affected by it with the likelihood that the economic costs to her being relatively higher than other regions of the world (Intergovernmental Panel on Climate Change, 2007; African Development Bank, 2012).

Climate change is characterised by increases in global temperature, sea level rise, ocean acidification etc. and its adverse impacts are already manifesting in Africa with more frequent occurrences of climate events such as floods, droughts and heat waves. These have catastrophic consequences such as heightened threat of food security, scarce water resources, deterioration in natural resources productivity, shrinking biodiversity, decline in human health viability, increasing land degradation, increasing desertification, and coastal zone recession (AFDB, 2012).

Addressing climate change and impacts is a specific goal of the SDGs (Goal 13) and is directly mentioned in targets under Goals 2 and 11 and is actually connected with most of the SDGs, thus, there is immense hope for sub-Saharan Africa that if nations within her chart a course for the SDGs within countries, then the problems of climate change will not be insurmountable. Focus on the SDGs in general and climate change in particular thus gives Africa the prospect of embracing a development trail that is climate resilient and less carbon-dependent in which clean and efficient energy technologies as well as sustainable management of natural resources becomes a reality. Under the United Nations Framework Convention on Climate Change (UNFCCC), African countries are increasingly executing nationally appropriate mitigation actions aimed at achieving a reduction in emissions that can worsen climate change. As of December 2013, among 57 countries that had submitted their mitigation actions to the secretariat of the UNFCCC, African countries made up 47% of them (UNECA, 2015a).

Environmental potentials are thus huge in sub-Saharan Africa and at the same time enormous problems persist. The all important question then is “How can the environmental potentials be realized in the midst of so many challenges?” The answer lies in deliberate actions, and not just plans and policies, which on their own represent a good start, however without implementation of such plans no progress can be made. Although environmental sustainability featured prominently in the Africa’s union Agenda 2063, currently however much is lacking in the area of environmental management and/or evidence-based actions. The key stakeholders connected with the environment in Africa such as African Ministerial Conference on the Environment (AMCEN) and the nations within her must not only emphasise environmental management by words, but must take the lead with appropriate actions. This informed AMCEN’s sixth special session in 2016 with the theme focused on implementation of Agenda 2030 and the 2015 Paris agreement on climate change and specific implications/ actions pointed out for countries (African Ministerial Conference on the Environment, 2016). Taking climate action will be key to achieving Africa’s potential and some governments are in line already with nineteen nations having already endorsed the Africa Clean Energy Corridor, which will cause an upsurge in the development of renewable energy projects to at least 40 per cent by 2030. It is projected that by 2063, renewables will provide more than half of the continent’s energy (Mohammed, 2016).

#### 4. Addressing environmental problems within the context of the SDGs to enhance SDGs fulfilment

It is imperative to know that the concept of sustainable development by its definition emphasized the central role of the environment. Sustainable development was defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland Commission, 1987). The problem with sub-Saharan Africa and other developing regions of the world is that the principles of unsustainable development have long been entrenched within the polity and the populace, and attempting to reach economic development has been a mirage because most economic policies, programmes and practices are at significant adverse costs to the environment which in turn leads to enormous lack of productivity and wastefulness in the long term, thus perpetuating the cycle of poverty or lack of economic development and environmental degradation. From this stems the view that for sub-Saharan Africa, the way to go is to prioritize the environment and the environment related SDGs within the context of the SDGs. This may not hold true for developed nations who have built capacities to handle or minimize land-degrading environmental challenges over the years, but it is certainly a right step in the right direction for Sub-Saharan Africa still confronted with massive degradation of ecosystems, air and water pollution, unsustainable resource use and threats posed by climate change as well as occasional natural disasters.

For sustainable development to take root in sub-Saharan Africa, the implementation of environment-related SDGs is crucial. Climate change and environmental degradation are significant threats to development and must be prioritized if sub-Saharan Africa is to be near anywhere near fulfilling the SDGs. Asian countries already came to this realization/ conclusion at the third Asia-Pacific Forum on Sustainable Development in April 2016, which started a regional dialogue on implementing Agenda 2030 (Asian Development Bank, 2016). Environmental challenges in sub-Saharan Africa are like an albatross that impede the fulfilment of the economic and social targets of the SDGs and therefore the SDGs themselves. It is a cul-de-sac which if not successfully opened or tackled makes the SDGs impassable and unachievable.

Stakeholders including national governments, AMCEN, UNEP and others must rise up to prioritize the environmental related SDGs in Sub-Saharan Africa. Although each country is unique and nations have differing needs and varying capacities based on prevailing national circumstances, suggested priority areas for all countries should include:

##### 4.1. Integration of SDGs

Mainstreaming the entire SDGs into national development plans, policies and priorities via appropriate tools and methodologies is of primary importance in each country. The African Union (AU) had set the African tone for development in 2013 when discussion for “Agenda 2063” started and was later adopted in 2015 as Africa’s desired aspirations by the year 2063 when the AU as an organization would be 100 years. The 2063 Agenda has seven major aspirations with several priority areas and is directly linked with 15 out of the 17 SDGs, thus there is a common ground between the SDGs and 2063 Agenda which in itself is good for Africa’s development (Ighobor, 2015; Abdelaziz, 2015). Ighobor (2015) concluded his article by saying “Given that most of the SDGs and their targets align with Africa’s priorities, the continent may well be on the brink of a transformation”. However, it is one thing to have a global or continental agenda for development; it is another thing for the leadership of each nation to integrate such agenda into national plans, policies and programmes as stipulated at the development of the SDGs (UN, 2015a). Each country must be encouraged and put on their toes by pertinent stakeholders including the United Nations and the Africa Union. One way in which this can be done is to set SDGs related themes for annual meetings/ conferences of Int’l organizations.

#### 4.2. Policies and legislations

Formulation and implementation of appropriate policies and legislations including those bordering on responsibility and accountability for the environment. Sub-Saharan Africa is where she is today because of the lawless ways things have been done in times past. There is a great need for her countries to put in place sound pro-SDGs policies including policies that will punish individuals and organizations for environmental degradations and contravention of sanitation laws. The “polluter pays principle” should be put in place for all and sundry (Anon, 2001). Legislations in the area of what proportion of the budget should be dedicated to environmental issues will also be very important; more funds would be needed to confront environmental challenges since they have been identified as the bane of development in sub-Saharan Africa.

#### 4.3. Institutional capacity building

Building up Institutions and institutional frameworks for SDGs as well as environmental governance and capacity development for environmental management and engineering will be crucial to the SDGs in Africa because institutional capacity for environmental monitoring is quite limited. Such institutions will be quite useful in the development and monitoring of environmental issues. Along with institutional development is the related issue of Human Resources development and management for the environment. The environment has long been neglected in sub-Saharan Africa and environmental experts are lacking, there is therefore need for training and re-training of environmental experts as well as creating an enabling environment for them to carry out their tasks. Thus, significant investments in human and material resources are needed for the SDGs.

#### 4.4. Establishment and strengthening of viable partnerships

The SDGs are too elaborate to be devoid of meaningful partnerships and that is why this is a specific goal in the SDGs (UN, 2015a). No nation or government can “go it alone” when it comes to the SDGs and this becomes more obvious from sub-Saharan Africa’s previously disadvantaged position, especially economically and environmentally. Sustainable partnerships are needed with local and international development partners especially with the organized private sector, civil society organizations and faith-based organizations. Faith based organizations and religious societies have major roles to play when it comes to the environment in sub-Saharan Africa as most Africans are strong adherents of one religion or the other (Mwambazambi, 2010), and it may be a principal tool in getting the SDGs rooted in our communities if religious bodies have a buy-in into the SDGs starting from something as basic as entrenching environmental sanitation principles among their members. Partnership with the Private Sector, local and Int’l is vital to the SDGs not only in the economy or social contexts but also in the environmental context of the SDGs. The vision of the environment being the bedrock of sustainable development must be sold to the private sector so that further socio-economic growth and development can take place. Other viable partnerships must be established locally, especially with media organizations as the media can be a major driving force for the SDGs. It is also important that vibrant partnerships exist among the various sectors connected with the SDGs. Inter-sectoral collaboration will be vital to progress in the SDGs as the SDGs involve virtually all sectors of the economy and government, one way to do this is to entrench the SDGs as the focal point of each sector or ministry and it automatically then becomes a rallying point for all sectors. Partnerships should also be forged along regional integration and accountability, for instance in the West African sub-region, the Economic Community of West African States (ECOWAS) can make the SDGs and/or Agenda 2063 a focal point of national and regional development and holds members accountable periodically. The seven Regional Economic Communities in sub-Saharan Africa need to do this.

#### 4.5. Monitoring and evaluation (M&E) of SDGs

One major problematic area for sub-Saharan Africa during the MDGs was in M&E issues as most countries in the African continent not only lacked the capacity to properly monitor progress but also to determine baseline conditions or the true starting point (UNECA, 2015b; OSSAP MDGs, 2015). Factual baseline data must be generated, especially in indicators related to environmental targets. Compared to the MDGs, measuring SDGs progress is a daunting task because of the increased number of goals, targets and indicators and their cross-cutting nature. In Asia, measurement and monitoring of environmental targets is the weakest among the sustainable development mainstays (economic, social and environmental) because of lack of environmental statistics (ADB, 2016), and the African continent is no different. However the fact that the SDGs have more environmental indicators clearly shows that the environment can be more properly monitored, with the ultimate result of good environmental governance. The governments of sub-Saharan African countries will need enhanced capacity in the collection, collation, analysis, interpretation and dissemination of data, especially those related to environmental targets. Regularity of publications that monitor environmental issues such as AMCEN’s Africa Environment Outlook will be crucial going forward.

#### 4.6. Eco-friendly infrastructural development

Infrastructures and the SDGs go hand in hand. Many basic infrastructures are lacking in sub-Saharan Africa, especially in rural areas and this is one of the main causes of rural-urban migration in developing countries. Rural areas are often neglected in developmental issues compared to urban areas and this was one of the main challenges with the fulfilment of the MDGs in Africa (UNECA, 2015b; OSSAP MDGs, 2015). In order to stem the tide of rural-urban migration and the consequent adverse effects of



urbanization on the environment, it is imperative that basic amenities like constant supply of electricity, good housing with basic sanitation etc. be prioritized for rural areas. Urban infrastructures also need significant expansion and technological improvement so as to accommodate the teeming urban population. It is noteworthy that the New Partnership for Africa's Development (NEPAD), a developmental agency of the African Union engages in resource mobilization for cross-border projects across several countries in Africa and some are about to be completed (Mayaki, 2015).

It is important that infrastructural development including those connected with industrialization takes into cognisance the environment and eco-friendly means must be put in all constructions and productions. Productivity must not be traded off for degradation, sub-Saharan Africa can no longer afford the maxim “pollute first, clean up later”, as industrial development must be harmonized with environmental sustainability.

#### 4.7. Promotion of eco-friendly agricultural practices

Hitherto Agriculture is the mainstay of sub-Saharan Africa's economy and this has become more apparent in countries which either too were over reliant on extraction of natural sources. The dwindling oil prices as well as that of other commodities have brought to the fore the need to go back to “good old agriculture.” In sub-Saharan Africa, agriculture directly contributes a significant part of the employment, exports as well as the GDP, for instance in Ethiopia, now one of the fastest-growing economy in the world, the agricultural sector accounted for almost 50% of her GDP, 84% of exports and 80% of total employment (Tafirenyika, 2015). In the light of current economic challenges, many people are not just being encouraged to embrace agriculture as a means of sustenance and livelihood, a lot of them have already ‘joined the train’ and this will put more “pressure” on the environment if evidence-based eco-friendly farming practices are not embraced by all. Agriculture is to be encouraged as much as possible but caution needs to be exercised when agricultural yields or gains are at the expense of the environment, so anti-environmental activities such as bush burning should be discouraged.

Apart from the direct economic gains of agriculture, there is a need for a sort of communal promotion of “green environs” in which inhabitants of each country in sub-Saharan Africa can be encouraged to keep a ‘green environment’ as much as possible. Plants provide food but they serve many other benefits including beautification of the environment, release of oxygen, shelter from the sun, and prevention of soil erosion, all of which are important positives for man in his own environment. There is a need to preserve and increase the level of the green areas especially in urban settlements where a lot of environmental degradation usually takes place. In the light of this, tree planting exercise, agro forestry, and community-based conservation schemes coupled with irrigation schemes should be intensified, and the general public should be encouraged to plant trees, flowers etc. (Daramola and Ibem, 2010; Mwambazambi, 2010).

#### 4.8. Improved communication networks and health education/ enlightenment of the general populace

At the adoption of the SDGs in September 2015, the government officials present at the declaration pledged that “no one will be left behind”. If indeed no one will be left behind, it behoves the key stakeholders like arms of governments and relevant agencies in sub-Saharan Africa to ensure that communities and individuals not only get to know about the SDGs but are encouraged to take an active part in their fulfilment. This becomes imperative especially in the environmental context of the SDGs wherein individuals should be made responsible and accountable for the ambient environment. Individual, group and population level methods of health education including use of social marketing, traditional mass media like TV radio, etc. the newer social media as well as community organization and community development strategies should be employed to reach everyone on SDGs and environmental protection in sub-Saharan Africa.

#### 4.9. Financing of SDGs especially “environmental SDGs”

The SDGs have a huge financial outlay and usually in sub-Saharan Africa environmental issues are seemingly of less importance when it comes to financing of projects compared with other priorities such as basic services or infrastructure provision. This is often so because it is difficult to directly quantify returns of investments on the environment, at least in the short term. There has to be significant commitments on the part of African leaders towards investing in the environment in particular and the SDGs in general, more so because unlike the MDGs, the SDGs are to be driven more with internally generated revenue rather than reliance on aid. It has been advocated that donor funds be used only to inspire domestic resource mobilization (UN, 2015a; Ighobor, 2015; Lopez, 2015). This is also the position of the African Union in Agenda 2063 which explicitly stated that Africa must take responsibility for her developmental goals.

#### 4.10. Ensuring peace, security and stability across sub-saharan Africa

One major hindrance to economic development and environmental sustainability in sub-Saharan Africa is conflicts, wars and acts of terrorism. The destruction associated with wars as well as crises associated with refugees or internally displaced persons ultimately leads to serious environmental problems and under-development. Conflicts discourage viable partnerships including private sector participation is key to achieving the SDGs (Abdelaziz, 2015). Good governance and security have been recognized by stakeholders across the key regions of Africa (UNECA, 2015a). National and regional peace and stability must be sought at all cost because conflicts and wars are anti-development. Recently, ECOWAS had to intervene in the political stalemate in The Gambia, so as to ensure

peace in Gambia and also in the sub-region and this move was lauded by Int'l bodies and nations and more of such regional enforcement of peace and democracy will be needed.

#### 4.11. Population control in line with corresponding socio-economic growth

Africa has the highest population growth rate in the world, and for there to be sustainable development, there has to be a corresponding economic growth. It therefore becomes imperative that population control need to be emphasized and family planning commodities made readily available and affordable. Without population control Africa's population will grow more quickly, further worsening the socio-economic conditions of the populace and environmental degradation.

#### 4.12. Promoting significant investments in renewable energy sources and other climate change solutions

Climate change is a reality that most countries in sub-Saharan Africa are yet to fully come to terms with and it is crucial that climate change solutions (CCS) be taken into consideration nationally and regionally. One principal CCS is the use of clean and renewable energy which are less carbon dependent. Although the developed countries of the world had pledged the sum of US\$100 billion dollars by 2020 to relieve the effects of climate change in developing countries based on the Paris agreement of 2015, African countries need to put their own financial resources too and marshal every effort at solving the potential challenges of climate change. Apart from funding issues for CSS-related projects, CCS needs to be integrated into every sphere and sector of national development with individuals, families and communities being involved.

### 5. Conclusion

All the three dimensions of the SDGs- social, economic and environmental are of equal importance and are inter-linked, however the definition of sustainable development in itself recognises the central place of the environment. The environment is a primary focus of the SDGs with about half the goals and targets being environmentally related. Though sub-Saharan Africa has rich environmental potentials, traditional environmental challenges such as deforestation, soil erosion, desertification, wetland degradation and water, land and air pollution persist and in recent times, the issue of climate change has taken centre stage. In the erstwhile MDGs, most sub-Saharan Africa countries failed in the achievement of environmental sustainability targets especially those related to sustainable access to safe drinking water, basic sanitation and improvement in the lives of slum dwellers. The cycle of poor environmental management and consequent poverty leading to unsustainable development in sub-Saharan Africa seems to be perpetual; however the SDGs with its holistic approach to development have come just at the right time to address these issues. With most countries battling severe economic crises that ultimately negatively impact on the environment, governments across sub-Saharan Africa and other stakeholders need to be reminded to pay special attention to environmental problems and viable partnerships coupled with adequate financing need to be put in place to tackle these problems. Pragmatic solutions to environmental problems via adequate planning, implementation and evaluation of policies and programmes using fiscal, legal, institutional, communication, educational and data-based tools as advocated in this write-up thus become imperative. Achievement of the SDGs in sub-Saharan Africa will remain a mirage until environmental issues are given a deserved priority by concerned stakeholders.

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